

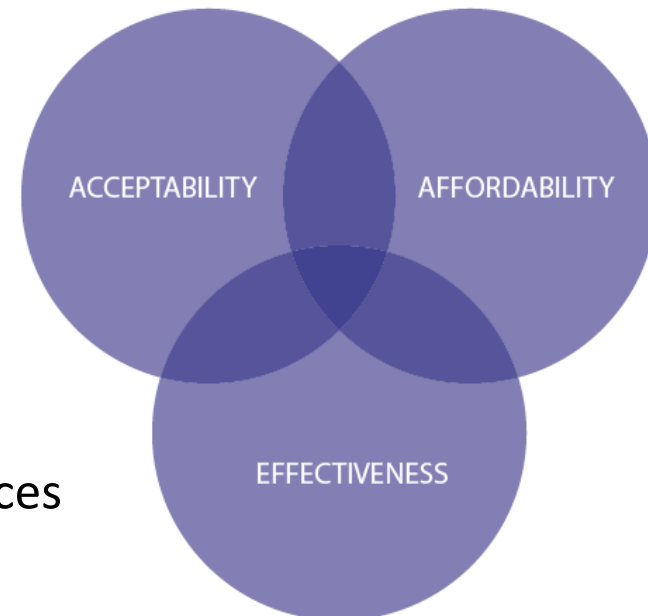
The background of the slide is a photograph of a residential street that has been completely flooded. The water is murky and brown, reflecting the overcast sky. In the background, several houses with light-colored roofs and walls are visible, partially obscured by the water and some trees. The overall scene suggests a significant weather event, likely a heavy rainstorm or hurricane, which is the context for the study mentioned in the text.

Feasible Options Study Central Arlington Heights Watershed Final Recommendations

**Public Meeting
October 13, 2011**

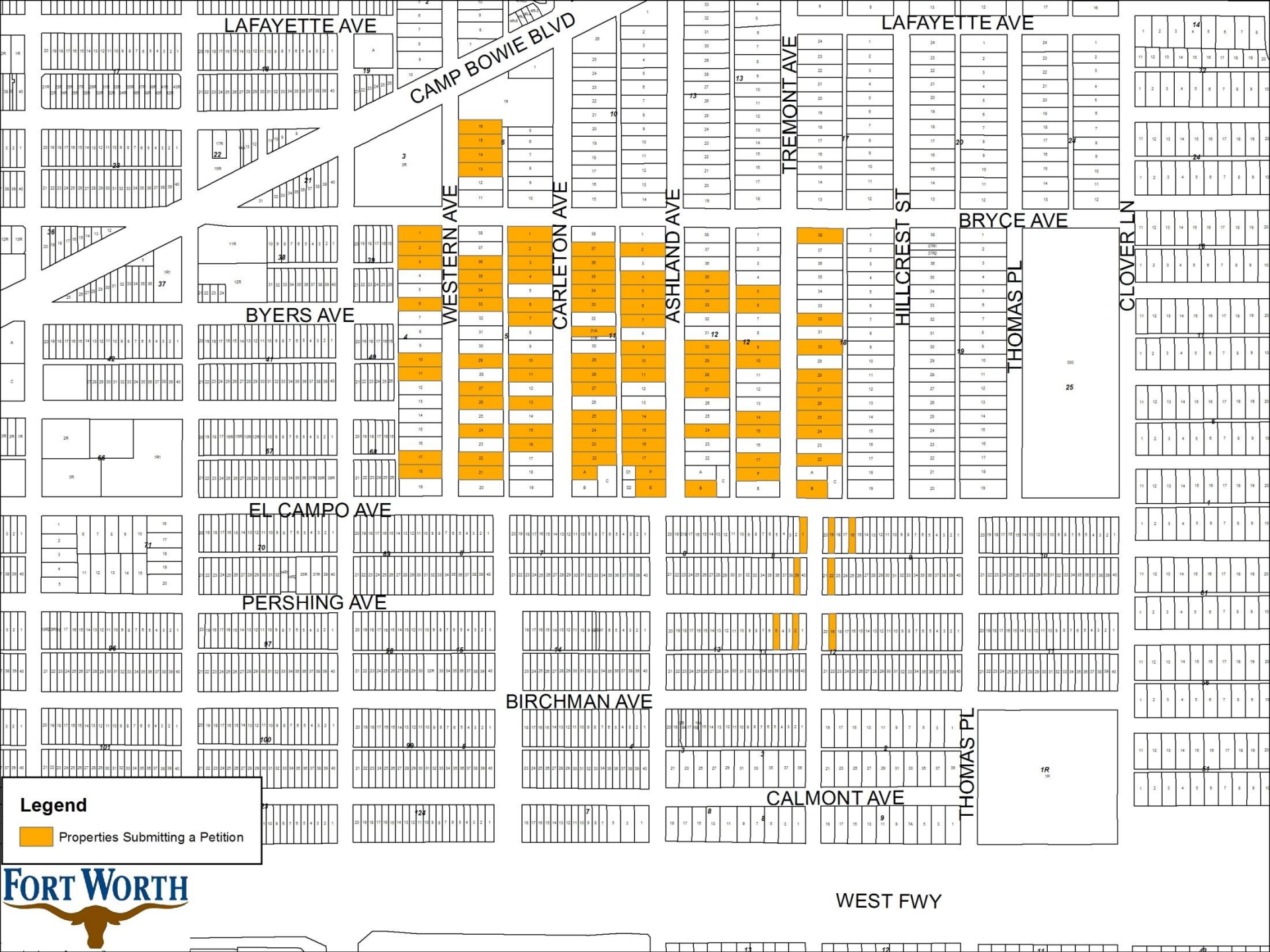
Timeline – Before Tonight

- September 22, 2010 – Initial Public Meeting
 - Introduced study, answered questions
- October 28, 2010 – Stakeholder Meeting
 - Discussed problem in greater detail, talked about various options
- December 9, 2010 – Stakeholder Meeting
 - Discussed general strategies
 - Strong push back regarding options involving buyout of homes
- January 15, 2010 – Tour of Arlington Heights
- February 24, 2011 – Stakeholder Meeting
 - Presented options
 - Discussion and feedback
- March 3, 2011 – Public Meeting
 - Presented options
 - Discussion and feedback
 - Attendees voted on options with interactive devices



Possible Mitigation Measures

- **Increase storage (detention)**
- **Increase conveyance (pipes, channels)**
- Avoidance (floodproof, acquisition)
- Coping (flood insurance, flood warning)



LAFAYETTE AVE

CAMP BOWIE BLVD

LAFAYETTE AVE

TREMONT AVE

WESTERN AVE

CARLETON AVE

ASHLAND AVE

HILLCREST ST

BYRCE AVE

THOMAS PL

CLOVER LN

BYERS AVE

EL CAMPO AVE

PERSHING AVE

BIRCHMAN AVE

CALMONT AVE

THOMAS PL

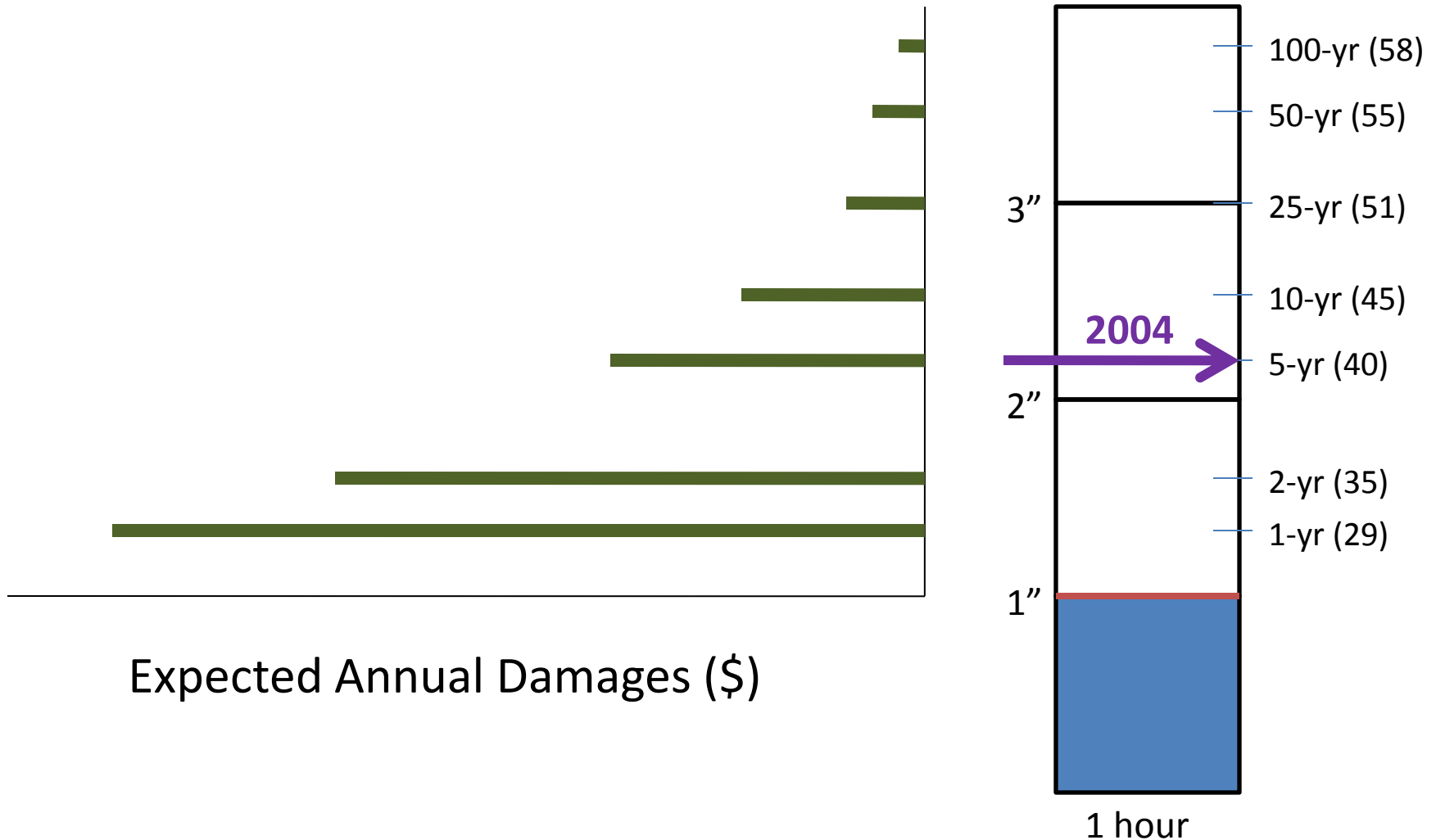
WEST FWY

Legend

Properties Submitting a Petition



Expected Annual Damage (considers likelihood of event)



General Conclusions

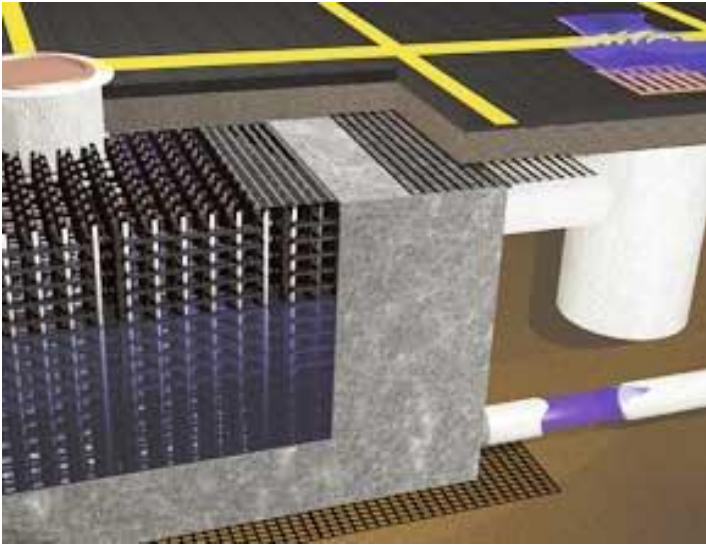
- We did not find the “magic solution” or the “silver bullet”
- Challenges and obstacles identified in past studies were validated
- The watershed is fully developed, and cost-effective solutions generally require land
- “Invisible” solutions can be implemented with underground infrastructure, but this is much more costly
- Community is opposed to alternatives involving mandatory acquisition of homes

Tonight

- Presentation of Feasible Options
- Recommendations
- Action Items

Short-Term Recommendations

Underground Storage Units





**Underground Detention in
Conjunction with City Projects**

1. Underground Detention in Conjunction with City Projects

- City paving and utility projects afford the opportunity to install underground detention in City Right-of-Way
- Feasibility of individual opportunities must be confirmed
- Most effective in low lying areas
- Current opportunities
 - Repaving of Western between Bryce and El Campo
 - Water and sewer project along Ashland between Bryce and El Campo
- Will provide storage of excess stormwater during rainfall events
- Incremental relief from flooding



**Property Acquisition/Detention –
Commercial Property near Hulen
& Bryce**

2. Property Acquisition/Detention – Commercial Property near Hulen & Bryce

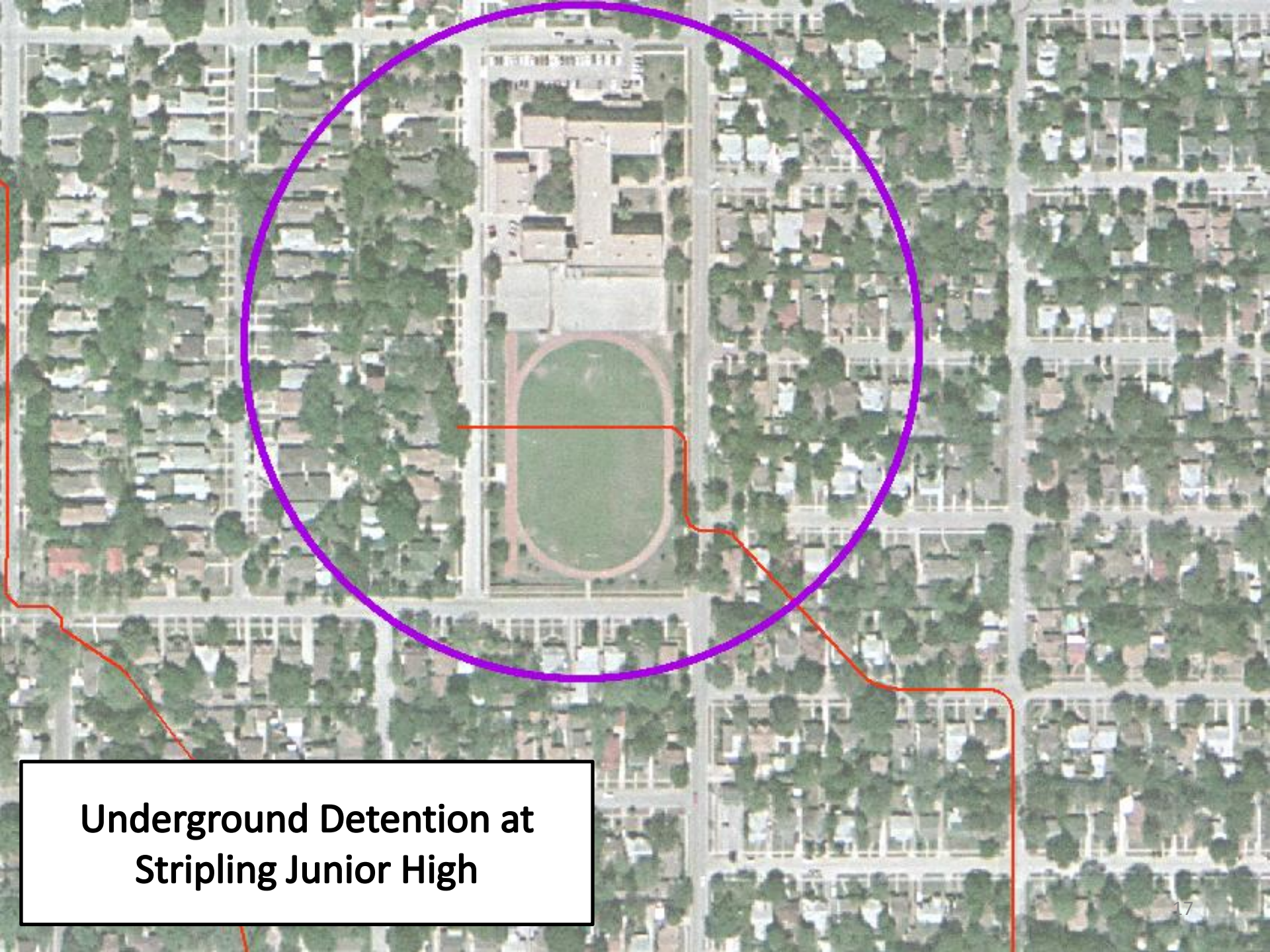
- Acquire available commercial and/or multi-family property in vicinity of intersection
 - City has purchased a property at southeast corner
- Construct interim detention
 - Small detention basins
 - Rain gardens
- Investigate demonstration project opportunities at Walgreens
- Demonstration of City's ability to maintain property in acceptable manner
- Eventually – larger detention and structures to divert water
- Challenge is elevation of land

3. Voluntary Property Acquisition

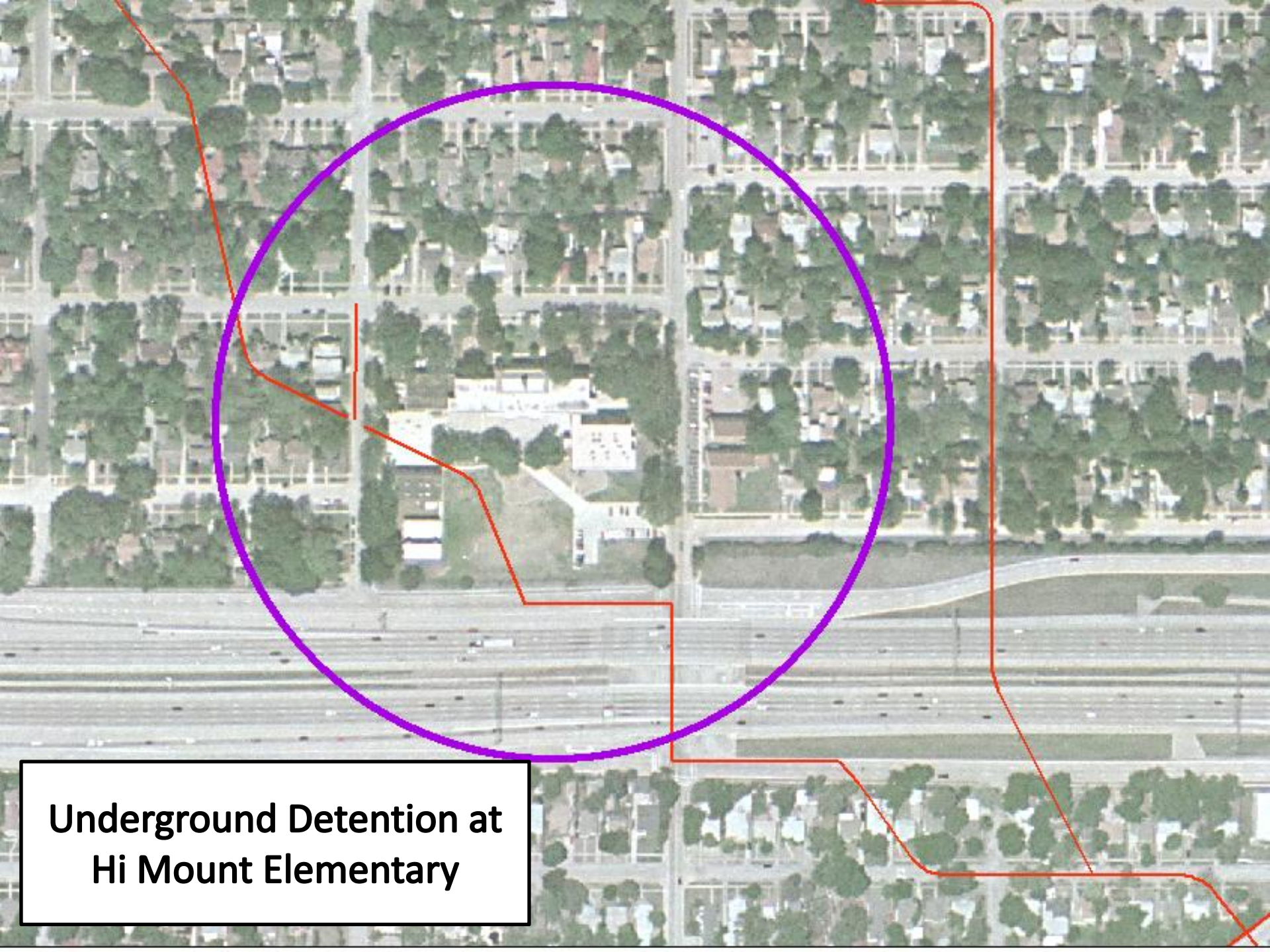
- If approached by property owner, consider acquisition of flood-prone properties
- Reactive, not proactive
- Criteria for evaluation
- City-wide
- Secondary use considerations

Mid-Term Recommendations

- May require coordination with others and alignment of schedules
- Additional refinement and cost analysis required



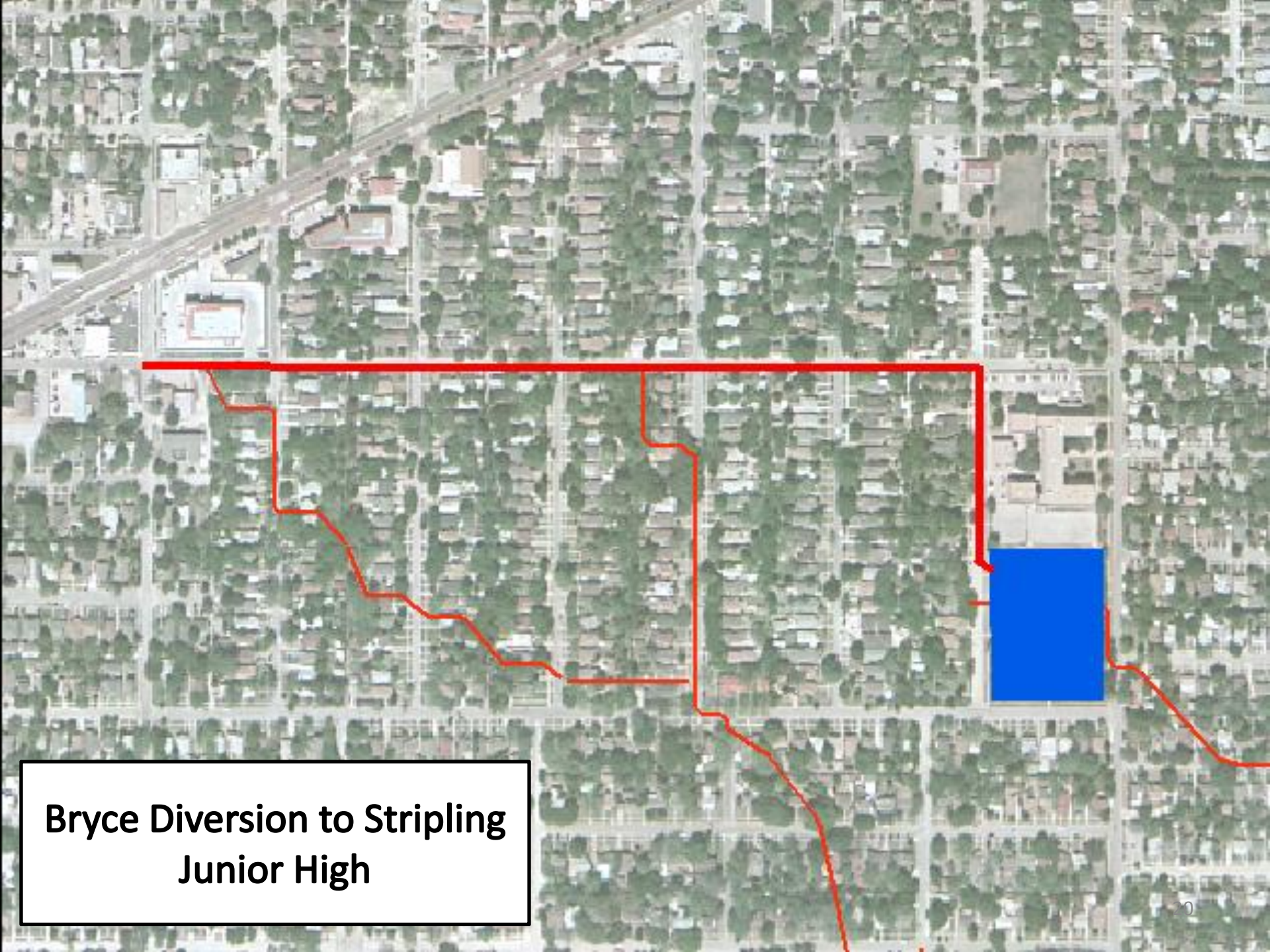
**Underground Detention at
Stripling Junior High**



**Underground Detention at
Hi Mount Elementary**

4. Underground Detention at Schools

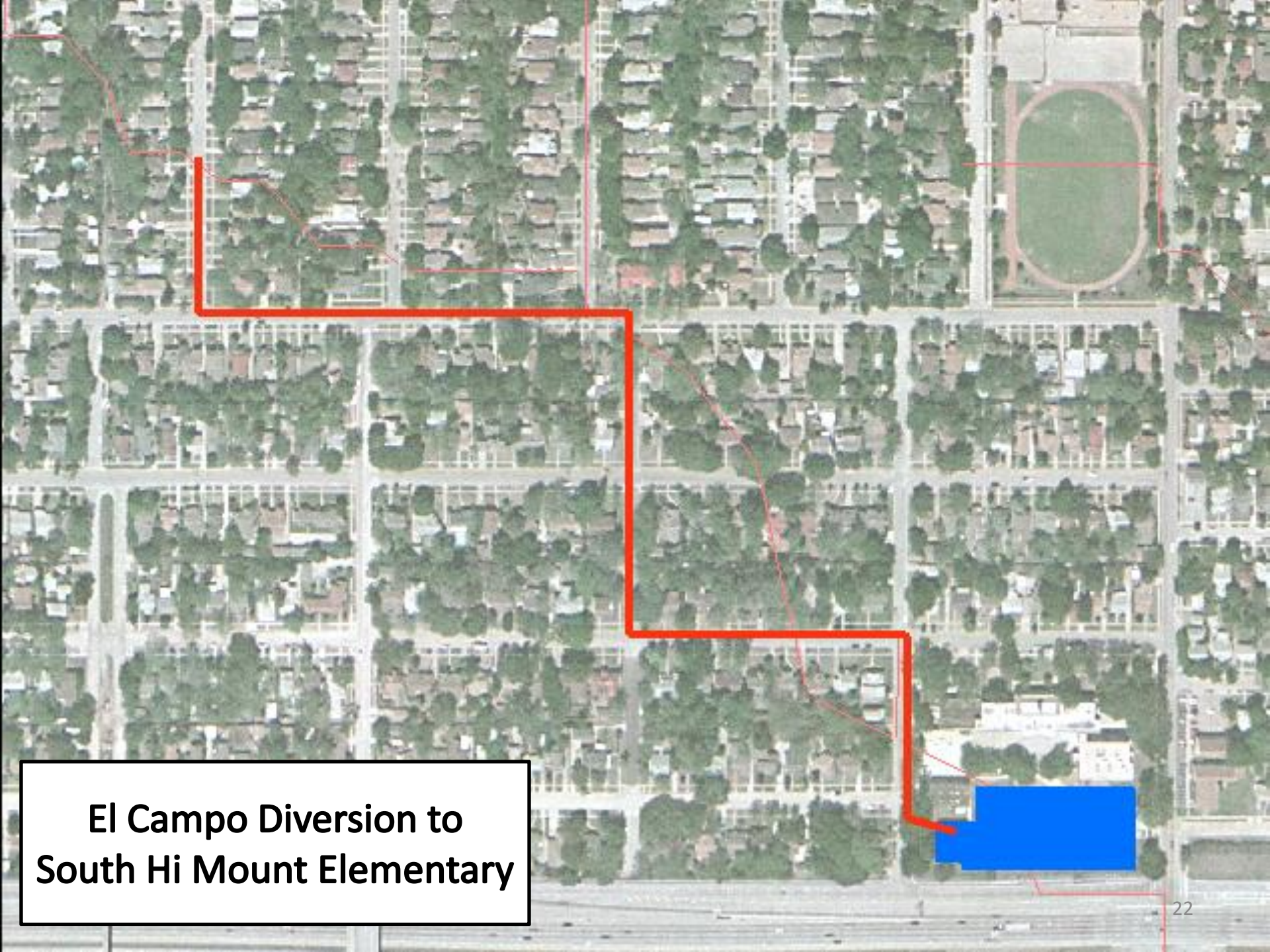
- Construct underground detention on campus
 - Stripling Junior High
 - South Hi Mount Elementary
- Initially – Demonstration Projects to assist local drainage
- Note: Fort Worth ISD has utilized underground detention to offset development impacts on some projects



**Bryce Diversion to Stripling
Junior High**

Bryce – Looking East from Ashland





**El Campo Diversion to
South Hi Mount Elementary**

5. Install Storm Drains to Divert Flow to Underground Detention at Schools

- Diversion storm drain along Bryce, from Hulen to Stripling
- Diversion storm sewer along El Campo and others, from Carleton to South Hi Mount
- Must demonstrate feasibility
 - Some tunneling will be required
 - Would be expensive
- Would address chronic flooding in Carleton and Western

Action Items

Begin Now...

- 1. Initiate/continue coordination and communication with Fort Worth ISD and commercial property interests near Hulen/Bryce intersection**

Begin Now...

1. Initiate/continue coordination and communication with Fort Worth ISD and commercial property interests near Hulen/Bryce intersection, and initiate acquisition of property as available
- 2. Install underground detention in conjunction with Western Avenue repaving and Ashland water and sewer project.**

Over Next Two Years

3. Prove-up Feasibility of storm drain diversions to school sites

- Engineering analysis**
- Schematics**
- Verify/refine costs and benefits**

Over Next Two Years

3. Prove-up Feasibility of storm drain diversions to school sites
 - Engineering analysis
 - Schematics
 - Verify/refine costs and benefits
4. **Coordinate within City to identify and implement detention opportunities with other City projects**

Next 3-10 years

- 5. Complete engineering design of recommended measures, and initiate construction as funding and priorities permit**

Ongoing

- Continue stakeholder/community engagement
- Commitment to maintenance
- Remain forward looking and opportunistic – pursue opportunities and partnerships as they become available

A photograph of a flooded residential street. The water is murky brown and turbulent, with visible ripples and small waves. In the background, there are houses with light-colored roofs and walls, partially obscured by trees. A large tree trunk is visible on the right side of the frame. The overall scene suggests a severe weather event or flooding.

Questions

Feasibility

- Effective – measures must reduce flood risk
- Affordable –
 - Within funding ability of City of Fort Worth
 - Must have appropriate value
- Acceptable – must be accepted by a general consensus of stakeholders

